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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/644,667	08/24/2000	Luis Felipe Cabrera	MSFT-0160/142385.1	5398

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EXAMINER	
ALI, MOHAMMAD	
ART UNIT	**PAPER NUMBER**
2167	

DATE MAILED: 03/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/644,667	CABRERA ET AL.	
	Examiner	Art Unit	
	Mohammad Ali	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 October 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is in response to the argument filed on 10/18/04.

Claims 1-45 are pending in this Office Action.

Response to Arguments

2. After further search and a thorough examination of the present application claims 1-45 remain rejected.

Applicants' arguments with respect to claims 1-45 have been considered, but they are not deemed to be persuasive.

First, Applicant's argue that anticipation have not been established.

In response to the applicant's argument the Examiner respectfully submits that anticipation have been established because Carter teaches all the limitations.

Second, Applicant's argue that Carter does not specifically teach "identifying at least one portion of the stream of data for migrating to the second storage".

In response to the applicant's argument the Examiner respectfully submits that Carter teaches the particular limitations as, the file system 60 exports a set of services to operate at the file level. The input to the services are the file object handle anode or the data stream object handle, and the operation specific parameters, including the desired portions of the data stream in byte positions. Open files are represented by data stream objects (or just file objects). Users access files using these file objects, identified to the users through file handles. A file handle is a 32-bit entity representing an instance of an open file stream (see col. 12, lines 3-11, Carter). A cache system for operating one of the local persistent memory devices as a cache memory for cache

storing data signals associated with recently accessed portions of the addressable memory space. Further the system can include a migration controller for selectively moving portions of the addressable memory space between the local persistent memory devices of the plural computers. The migration controller can determine and respond to data access patterns, resource demands or any other suitable criteria or heuristic. The migration controller can balance the loads on the network, and move data to nodes from which it is commonly accessed (see col. 16, lines 28-39, Carter).

Third, Applicant's argue that Carter does not specifically teach "migrating said at least one portion of the data stream".

In response to the applicant's argument the Examiner respectfully submits that Carter teaches the particular limitations as stated above.

Fourth, Applicant's argue that Carter does not specifically teach "additional file system metadata".

In response to the applicant's argument the Examiner respectfully submits that Carter teaches the particular limitations as, each directory page 120 includes a page header 322 that includes attribute information for that page header, which is typically metadata for the directory page, and further includes directory entries such as the depicted directory entries, 324 and 326, which provide an index into a portion of the shared address space wherein that portion can be one or more pages, including all the pages of the distributed shared memory space (see col. 25, lines 66 to col. 26, lines 8, Carter).

Fifth, Applicant's argue that Carter does not specifically teach "preserving said stream's data relationships".

In response to the applicant's argument the Examiner respectfully submits that Carter teaches the particular limitations as, the stream allocation size reports the total allocation size in pages required for one replica and pages backing temporary files. So there is a relation to preserve the stream's data with the size (see 13, lines 14-15, Carter).

Sixth, Applicant's argue that Carter does not specifically teach "whereby a stream of data may register for administration for partial migration techniques".

In response to the applicant's argument the Examiner respectfully submits that Carter teaches the particular limitations as stated above and the file system 60 exports a set of fileset level operations that allow an administrator to manage the filesets through the following type of actions such fileset creation, fileset deletion,...etc (see col. 10, linesx 3-5, Carter).

Hence, Applicants' arguments do not distinguish over the claimed invention over the prior art of record.

In light of the foregoing arguments, the 102 rejections are hereby sustained.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-45 are rejected under 35 U.S.C. 102(e) as being anticipated by Carter et al. ('Carter' hereinafter), USP 5,987,506.

With respect to claim 1,

Carter discloses "identifying at least one portion of the stream of data for migration to the second storage location" at col. 12 lines 3-7;

"migrating said at least one portion to said second storage location, wherein said migrating includes and (B) generating additional file system metadata relating to said stream of data" at col. 3, lines 7-9 and col. 11, lines 34-35;

"preserving said stream's data relationships via said additional file system metadata,..." at col. 11 lines 60-66, Fig. 2 et seq.

As to claim 2,

Carter teaches "first storage location and said second storage location are located on different volumes" at col. 12, lines 60-67, Fig. 2

As to claim 3,

Carter teaches "identifying of said at least one portion for migration includes identifying said at least one portion according to pre-set criteria" at col. 12, lines 6-7, Fig. 2

As to claim 4,

Carter teaches "identifying of said at least one portion for migration includes specifying the size of an archive unit" at col. 3, lines 7-9, Fig. 2.

As to claim 5,

Carter teaches "identifying of said at least one portion for migration includes specifying the size of a region of updates" at col. 4, lines 54-55.

As to claim 6,

Carter teaches "identifying of said at least one portion for migration includes specifying a memory allocation limit for the stream of data applicable to said first storage location" at col. 4, lines 11-14, Fig. 2.

As to claim 7,

Carter teaches "moving of said at least one portion is performed without exceeding said memory allocation limit" at col. 4 lines 60-67.

As to claim 8,

Carter teaches "the stream of data has at least one identifiable region of updates" at col. 7, lines 48-50.

As to claim 9,

Carter teaches "wherein said identifying,....." at col. 12, lines 5-7 et seq.

As to claim 10,

Carter teaches "wherein said type of stream,..." at col. 38, lines 33-34.

As to claim 11,

Carter teaches "wherein said type stream,...." at col. 25, lines 13-14, Fig. 8.

As to claim 12

Carter teaches "said second storage location is a sequential access medium (SAM)" at col. 12, lines 6-67, Fig. 12.

As to claim 13

Carter teaches "said first storage location is a local location and said second storage location is a remote location" at col. 3, lines 7-9, Fig. 8.

As to claim 14,

Carter teaches "wherein said first storage location,...." at col. 3, lines 7-9, Fig. 6.

As to claim 15,

Carter teaches "wherein said first storage,...." at col. 3, lines 7-9, Fig. 6

As to claim 16

Carter teaches "said preserving the data relationships of said stream includes generating metadata for description of said relationships" at col. 10, lines 58-59, Fig. 12.

As to claim 17,

Carter teaches "wherein said metadata,...." at col. 6, lines 25-29, Fig. 1.

As to claim 18,

Carter teaches "wherein said metadata,...." at col. 6, lines 25-29, Fig. 1

As to claim 19,

Carter teaches "wherein the storage for said at least,..." at col. 12, lines 5-7, Fig. 2.

As to claim 20,

Carter teaches "wherein said stream of data,..." at col. 12, lines 5-7, Fig. 2.

As to claim 21

Carter teaches "A computer-readable medium having computer-executable instructions for instructing a computer to perform the method recited in claim 1" at col. 12, lines 5-7, Fig. 2.

With respect to claim 22

Carter discloses "wherein said migration includes relocation of the at least one portion from the first storage location to the second location" at col. 4, lines 10-12:

"an identifier identifying the stream of data for which at least one portion is migrated" at col. 12 lines 3-7;

"data representative of the storage service used in connection with the migration of said at least one portion" at col. 3, lines 7-9 and col. 11, lines 34-35;

"data representative of the memory mappings of said at least one migrated portion at col. 11 lines 60-66, Fig. 2 et seq;

"whereby said entire stream of data remains accessible to a user of the file system as if said at least one portion of the stream of data were not migrated" at col. 4 lines 9-12, Fig. 2 et seq.

As to claim 23

Carter teaches "further comprising temporal data relating to a time of migration of said at least one portion of said stream of data" at col. 12, lines 5-7.

As to claim 24,

Carter teaches "a data structure stored,....." at col. 6, lines 17-20, Fig. 2 et seq.

As to claim 25,

Carter teaches "a data structured stored,....." at col. 6, lines 17-20, Fig. 2 et seq.

As to claim 26,

Carter teaches "a data structured stored,....." at col. 6, lines 17-20, Fig. 2 et seq.

As to claim 27

Carter teaches "A modulated data signal for carrying information that encodes a data structure as recited in claim 22" at col. 6, lines 17-20, Fig. 2 et seq..

As to claim 28

Carter teaches "An application programming interface (API) for use in a computer system, whereby a stream of data may register for administration for partial migration techniques according to the method of claim 1" at col. 7, lines 45-46, Fig. 1 et seq.

As to claim 29

Carter teaches "An API according to claim 28, whereby said interface provides a common way to generate and store metadata in connection with the partial migration of streams of data to secondary storage" at col. 6, lines 17-20, Fig. 2 et seq.

With respect to claim 30

Carter teaches "a hierarchical storage management (HSM) system for administering a stream of data for partial migration" at col. 9, lines 4-6, Fig. 2 et seq.;

source storage location having a stream of data stored thereon being serviced by said HSM system" at col. 12, lines 5-7, Fig. 2 et seq.;

"wherein said HSM system identifies and migrates at least one portion of said stream of data to a target storage location according to pre-set criteria" at col. 4, lines 9-14, Fig. 2 et seq.

"generates metadata for the description of data relationships of said at least one migrated portion" at col. 4, lines 9-14, Fig. 2 et seq.

"wherein said migrating means to relocate the at least one portion from the first storage location to the second location" at col. 4, lines 9-14, Fig. 2 et seq.

"whereby said entire stream of data remains accessible to a user of the file system as if said at one portion of the stream of data were not migrated according to said migrating" at col. 12, lines 5-7, Fig. 2 et seq.

As to claim 31,

Carter teaches "wherein the HSM system specifies the size of an archive unit" at col. 4, lines 9-14, Fig. 2 et seq.

As to claim 32,

Carter teaches "wherein the HSM system specifies the size of a region of updates" at col. 4, lines 54-55, Fig. 2 et seq.

As to claim 33,

Carter teaches "wherein the HSM system specifies a memory allocation limit for the stream of data applicable d source storage location" at col. 4, lines 9-14, Fig. 2 et seq.

As to claim 34,

Carter teaches "wherein the HSM system moves at least one portion of the stream of data such that said allocation limit is not exceeded" at col. 3, lines 6-9, Fig. 2 et seq.

As to claim 35,

Carter teaches "wherein the HSM system identifies a stream of data that has at least one identifiable region of ,.." at col. 4, lines 9-14, Fig. 10 et seq.

As to claim 36,

Carter teaches "wherein said identifying by said HSM,...." at col. 12, lines 5-7, Fig. 2 et seq.

As to claim 37,

Carter teaches "wherein said type of stream,....." at col. 12, lines 5-7, Fig. 2 et seq.

As to claim 38,

Carter teaches "wherein type of stream of data,...." at col. 25, lines 10-15, Fig. 8 et seq.

As to claim 39,

Carter teaches "wherein said target storage,...." at col. 25, lines 10-15, Fig. 8 et seq.

As to claim 40,

Carter teaches "wherein said source storage location,...." at col. 25, lines 10-15, Fig. 8 et seq.

As to claim 41,

Carter teaches "wherein said source storage location,...." at col. 6, lines 25-35, Fig. 1 et seq.

As to claim 42,

Carter teaches "wherein said metadata,....." at col. 6, lines 25-35, Fig. 1 et seq.

As to claim 43,

Carter teaches "wherein said metadata,...." at col. 6, lines 25-35, Fig. 1 et seq.

As to claim 44,

Carter teaches "wherein the HSM system,...." at col. 6, lines 15-20, Fig. 1 et seq.

As to claim 45,

Carter teaches "wherein said stream,...." at col. 12, lines 5-7, Fig. 2 et seq.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of Time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

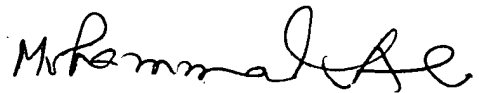
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad Ali whose telephone number is (571) 272-4105. The examiner can normally be reached on Monday-Thursday (7:30 am-6:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mohammad Ali
Primary Examiner
Art Unit 2167

MA
March 01, 2005



MOHAMMAD ALI
PRIMARY EXAMINER